



CERTIFIED ORGANIZATION

DOCUMENT SUBJECT: EQUIPMENT CATALOGUES

DOC. NO. : ARM-ECP-TO-EC-01

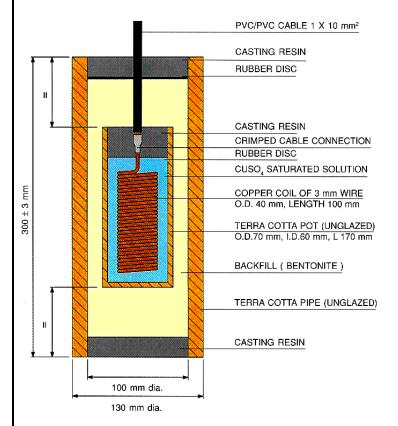
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ArmREF-DC Permanent Cu/ CuSO4 Reference Electrode

Permanent Cu/CuSo4 half cells produced by Armin have been design and tested to comply BS7361-CP1021 code of British standards under Armin's highest quality assurance program. All copper sulfate electrodes are shipped include a charge of high-purity copper sulfate crystals.

Electrode potential are subject of tests and calibration as well as +320 mV referring to H2 Potential.

Permanent reference electrodes would be used for permanent measurement of Test Posts and/or to generate Soil to structure feedback signal for Potential controlled CP Power sources as well as Automatic Transformer/rectifier units and solar powered CP stations.



ArmREF-DC type of permanent reference electrode is recommended for applications where the soil would be dry for long terms of operation period such as CP installation in desert, and also is recommended type for external CP monitoring of storage tank bottom cathodic protection applications.

Permanent Reference electrodes are Pre-Packaged with low resistivity none polarized Backfill containing following composition;

70% Bentonite
10% Vermiculite
20% Sodium Sulfate

Approx. Dia. : 260 mm Approx. Height : 560 mm Approx. Weight: 28 Kg

Each Reference electrode has been completed within 15 Meters of continues 1X10 sq.mm CU/PVC/PVC Black Cable tail.







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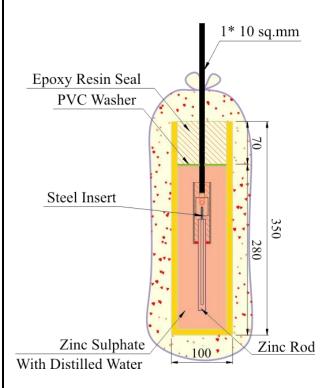
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ArmREF-ZNSC Permanent Zn/ZnSO4 Reference Electrode

Permanent reference electrodes would be used for permanent measurement of Soil to Structure potential via Test Posts in Cathodic Protection (CP) application, and also to generate feedback signal of polarization potential for Auto-Potential controlled Transformer/rectifier units as well as solar powered CP stations.

Permanent Zn/ZnSo₄ half cells produced by ARMIN have been design and tested to comply latest industry standards under ARMIN's highest quality assurance program.

Electrode potential is subject of tests and calibration as well as -770 mV referring to H2 Potential.



Each Reference electrodes have been completed within suitable length of continues 1×10 Sq.mm CU/XLPE/PVC Black Cable tail depending to the application requirements.

ArmREF-ZNSC type of permanent reference electrode is recommended for applications where the soil would have high value of salinity and is highly recommended for potential monitoring of external storage tank bottom Cathodic Protection applications.

Permanent Reference electrodes are Pre-Packaged with low resistivity none-polarized Backfill containing following composition;

- **4** 70% Bentonite
- ✤ 10% Vermiculite

4 20% Sodium Sulfate

Approx. Dia. : 260 mm Approx. Hight : 560 mm Approx. Weight: 28 Kg







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ArmREF5 Cu/CuSO4 Reference Electrode

Portable Cu/CuSo4 half cells produced by Armin have been design and tested to comply BS7361-CP1021 code of British standards under Armin's highest quality assurance program. All copper/copper sulfate electrodes are shipped include a dry charge of high-purity copper sulfate crystals, which shall be completed with pour water before test and survey execution.

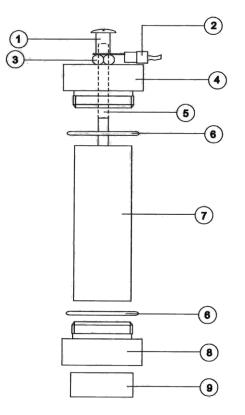
Electrode potential are subject of tests and calibration as well as +320 mV referring to H2 Potential.

ArmREF5 model Portable electrodes are supplied with Flat CPT Porous Plug and protective cap, for general use in soil applications within the following dimensions.

> Approx. Dia. Approx. length Cable Type Dry weight

: 35 mm : 152mm : #14 Cu/PVC : 145 Gr





ArmREF5 Model Reference Electrode consists of following parts;

- 1. Handy Nut
- 2. Wire Termination
- 3. Hex Nut
- 4. Top Fitting
- 5. Copper Electrode
- 6. Sealant O Ring
- 7. Housing Tube
- 8. Bottom Fitting
- 9. Porous Plug